Dear FCC,I am commenting on the Federal Communications Commission (FCC) Engineering
and Technology Notice of Inquiry Docket No. 03-104 regarding Carrier Current Systems, including Broadband over Power Line (BPL) Systems.
As a licensed amateur radio operator, I am very concerned with the spectrum pollution
(interference) associated with the new proposed broadband over power line technology
the FCC is considering for approval for use by the power line industry.
The industry plans to use a form of power line carrier (PLC) technology using existing low and medium-voltage power lines to deliver broadband (internet) services to homes and businesses. It uses frequencies between 2 MHz and 80 MHz; and ARRL laboratory and in field tests have documented that BPL causes interference (spectrum pollution) to HF and low-VHF frequencies currently in use by the Government (Department of Defense and Homeland Security), law enforcement agencies, amateur radio and commercial businesses. Further, the current BPL technology itself may be susceptible to transmissions from other existing services.
The power lines typically run in close proximity to the telephone lines which carry ADSL broadband services now in the frequency range up to 25 MHz for
VDSL. The phone lines are well balance at 60Hz, but have poor balance at higher
frequencies. Because of their continuous coupling over long distances (thousands of feet), there is significant coupling of broadband data energy into the common mode of the telephone line. The power line has essentially no rejection at frequencies above the audio range because the line spacing and twist
don't provide any. So the first objection is interference to existing broadband
services and telephony.

Current Part 15 standards permit PLC applications but these currently are used for slow speed data and control of utility equipment. They are low power and
generally are at frequencies little used. These Part 15 device as used by utilities,
typically do not run through residential neighborhoods. The current Part 15 limits
permit these operations and cause little noise pollution of the spectrum. Raising the Part 15 limits WILL cause spectrum pollution and harmful interference
to licensed services. This is the second objection to this docket.

The third objection is that permitting this service opens it to interference from
licensed services such as amateur radio. The effects of licensed services such as citizens radio, AM broadcasting, and amateur radio on these Part 15 devices
will cause significant interruption to a user of this service. Existing part 15 users
expect and plan on interference from licensed users. Its a requirement of the law. I
don't expect that a customer paying for data service over the power line to accept any
interference even if the law says they should. And why should they accept this if they

are paying for the service? Try explaining that.

The fourth objection is that it causes wide spread interference to amateur radio operation.
Because of the broad nature of the interference, Amateur Radio Operators won't have any
alternative choice in frequency to avoid the interference from BPL. Tests conducted by the
ARRL show this to be a fact. With this kind of interference, licensed amateurs will not be able to assist in disaster relief such as hurricanes, terrorist attacks like 911, or power outages like the 14 of Aug.

Regarding the FCC Notice of Inquiry ET Docket No. 03-104, I recommend tightening of the FCC Part 15 requirements and/or standards for power line carrier (PLC) devices to assure they will not cause interference (or be susceptible from) to existing services. In addition, I would appreciate documentation from the FCC that adequate testing has been performed to assure broadband over power line technology will not cause interference to existing services. Hopefully, this testing will be well documented and made public before the technology is approved for use by the power line industry.

FCC support to my comments for consideration will be appreciated.
Regards

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